

High Speed Photodetector for Terahertz Applications, Phase I

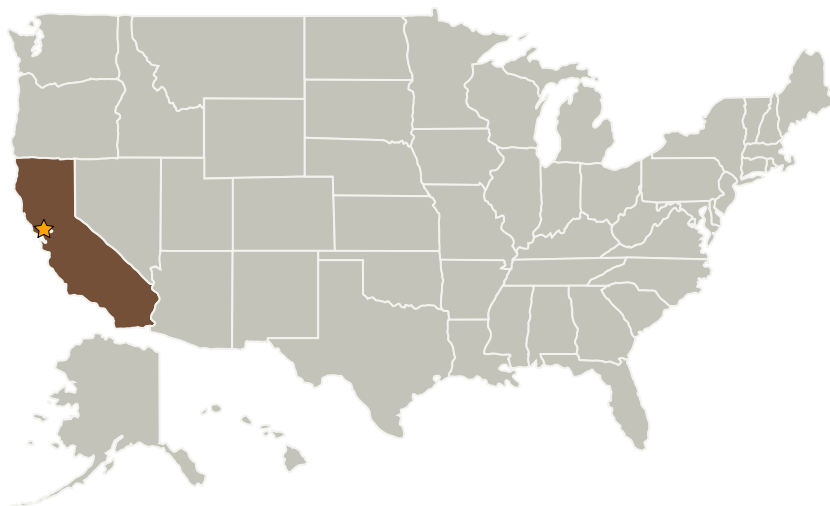
Completed Technology Project (2004 - 2004)



Project Introduction

The ever increasing volume of the information to be transmitted and processed demands fast communication systems that can fulfill a throughput of 1 Tb/s or even 10 Tb/s. This requires more than 100 times improvement of performance over today's fiber optic communication systems, and calls for the development of terahertz or femtosecond technologies. Applied Quantum Systems proposes an innovative photodetector for ultrahigh speed or terahertz applications. The success of this program will lead to drastic improvement of device performance in response speed, gain, responsivity and detectivity. Phase I of this program is to demonstrate the proof-of-concept, while Phase II will be built on the success of Phase I and seek the commercialization of the technology.

Primary U.S. Work Locations and Key Partners



Organizations Performing Work	Role	Type	Location
★Ames Research Center(ARC)	Lead Organization	NASA Center	Moffett Field, California
Applied Quantum Systems, Inc	Supporting Organization	Industry	Fullerton, California



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Organizational Responsibility

Responsible Mission Directorate:

Space Technology Mission Directorate (STMD)

Lead Center / Facility:

Ames Research Center (ARC)

Responsible Program:

Small Business Innovation Research/Small Business Tech Transfer

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Primary U.S. Work Locations

California

Project Management

Program Director:

Jason L Kessler

Program Manager:

Carlos Torrez

Principal Investigator:

Larry Yang

Technology Areas

Primary:

- TX12 Materials, Structures, Mechanical Systems, and Manufacturing
 - └ TX12.2 Structures
 - └ TX12.2.3 Reliability and Sustainment